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WHO APPLIED FOR STUDENT FINANCIAL AID?

Fifty-one percent of the 1980 high school seniors who aspired to continue their education (college, vocational, or technical postsecondary training) applied for student financial aid by the fall of that year according to the National Center for Education Statistics (NCES). The rates of application varied as a function of student plans, inclinations, and aspirations; family wealth; family size; parental knowledge of financial aid programs; and expected schooling costs. Several of these factors appeared to have as significant a relationship with rates of application for aid as did family wealth. For example, the amount of parental knowledge about the Pell grant program was strongly related to differences in application rates. In fact, these differences were greater than those associated with family income or amount of savings for college.

After controlling for family income, the factors showing the strongest relationship with application rates were (a) parental knowledge, (b) students' high school grades, and (c) expected schooling costs.

These findings are based on data from High School and Beyond (HS&B), a national longitudinal study conducted by NCES. Base-year data were collected from a sample of seniors in spring 1980. In the fall of that year, a sample of their parents responded to questions about the financing of subsequent education expected for their children. The parents answers to these questions, coupled with data from their children's questionnaires, were used in this analysis of application for financial aid.

The overall objective of these analyses was to illuminate the factors which influence a student's tendency to apply for Federal financial aid. Since Federal aid is based upon financial need, it seemed appropriate to investigate the

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following variables: family income, family net worth, number of siblings in college, parental savings for education, and expected costs (school and living). The amount of knowledge parents have about the major Federal programs, by type and number, was analyzed. Further, the high school grades of students were included as indications of the students' knowledge gathering and absorbing skills. Also included was a variable of great interest to the loan programs: student inclination to borrow. Race/ethnicity and educational aspiration were analyzed to address concerns with equality and the adequacy of the supply of educated youth for the labor market. Finally, because the postsecondary decision process is known to be a very complex and time-dependent variable, the student's plans for the year after high school were analyzed as a measure of the stability of his or her educational aspirations.

Financial Need

Family income is the variable most frequently used in policy analyses of student financial aid. As may be seen in the "Total" row of the table (see pages 6 through 8 where the table begins), rates of application decrease as income increases. However, this trend is reasonably gradual except at the highest income point. Specifically, students from families with incomes above $48,000 applied at significantly lower rates. Furthermore, incomes below $12,000 were associated with significantly higher rates than were incomes above $30,000.

Federal student financial aid programs are based primarily on financial need, and most policy analyses of these aid programs have focused attention on family income. This analysis follows that tradition. Therefore, several other variables were examined for each of the five levels of family income shown in the table.

Application rates varied significantly as a function of family net worth.[1] A curvilinear relationship was found to exist between family net worth and application rates. Among families of very low net worth (debts in excess of $5,000) the application rate was 52 percent. At the next higher category of net worth ($4,999 in debt to $99 in assets) the rate was significantly higher, 62 percent. At the next higher category of net worth ($100 to $9,999) the application rate dropped, but not significantly, to 56 percent. At the next higher category ($10,000 to $49,999) the application rate dropped, significantly, to 44 percent. Finally, among the most wealthy families (net worth of $50,000 or more), the application rate dropped to a level (32 percent) which was significantly lower than that prevailing at any other category of net worth.

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[1] Net worth was derived as the difference in total assets (including home equity) and total liabilities. This definition is not the same as is used in the determination of expected family contributions for the Pell grant program.

As the number of other siblings in college increased, application rates increased. Overall, there was a significant increase when two or more siblings were in college. Although this increase was observed for all family incomes above $12,000, it was statistically significant only for the $18,001 - $30,000 category.

Parental expectations of schooling costs were strongly related to rates of application for aid. When expected schooling costs were zero, the rate of application was extremely small (less than that associated with any of the other cost levels). This aggregated finding was replicated at income levels below $18,000. At the higher levels of expected costs, the apparent trend for increased sensitivity among the middle income groups ($18,000 to $48,000) failed to be statistically significant.

Expected living expenses were also related to rates of application. When no living expenses were expected or the student planned to live at home, the rate of application was lower.

The amount of parental savings specifically earmarked for the student's postsecondary education was weakly, but significantly related to application rates. Analysis of savings at the five levels of family income failed to yield significant differences. The most interesting statistic on parental savings was that 62 percent of all parents had no savings for their children's postsecondary education (not shown in table).

Knowledge, Inclination, and Aspirations

The level of postsecondary education desired by the student was highly related to the rate of application for student financial aid. When students aspired to less than a Bachelor's degree, they applied for aid at a significantly lower rate. This relationship was observed at all income levels below $48,000, but the application rates were significantly lower only for students from families in the $12,001 to $18,000 range.

These findings regarding aspirations should be tempered by noting the effect of the students' plans. Clearly, students not planning to immediately attend postsecondary education applied for aid at a lower rate. It is interesting to note that 28 percent of the students not planning to attend applied for financial aid. This may indicate the substantial uncertainty which many high school seniors experience in the postsecondary transition process.

As expected, the amount of knowledge of financial aid programs was related to rates of application. Specifically, parental knowledge of each of the four

major Federal programs[2] was strongly related to rates of application. Also, the total number of such programs with which parents were familiar was strongly related to rates of application. When viewed in conjunction with family income, lack of knowledge was substantially related to reduced application rates--even for low income students.

Students who were inclined to borrow to meet college costs applied at higher rates than students not so inclined. This finding was observed in varying degrees at all income levels but was statistically significant only among families with incomes above $18,000. The inclination to borrow was quite pronounced at the $18,000 to $30,000 level (the target of the Middle Income Student Assistance Act).

Academic Achievement and Equality of Educational Opportunity

Although all Federal financial aid programs are based on need, there are many small privately funded programs which base their awards upon student achievement. In this analysis, rates of application for aid were found to be related to the students' high school grades. Indeed, students with an A average applied at higher rates than lower achieving students.

Several Federal programs are focused on equal opportunities for disadvantaged students. Blacks applied for financial aid at a substantially higher rate than white majority students.

LIMITATIONS OF THE DATA

Basic student data in HS&B were supplied by a sample of 58,000 sophomores and seniors in spring, 1980. The parents of a subsample of about 3,400 sophomores and 3,200 seniors completed a Parent Questionnaire. The responses of these seniors and of their parents are the data on which this bulletin is based. It is possible that their views were different from those that would be held by parents whose children were further along in postsecondary education or whose children graduated in other years.

Since the statistics presented are estimates derived from a sample, they are subject to sampling as well as non-sampling errors. Sampling errors occur because the data were supplied by only a sample of parents of high school seniors, not by all such parents. Non-sampling errors arise from such sources as the failure of some parents to return the forms, misinterpretation of questions, etc.

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[2]The four major Federal financial aid programs are: Pell grants, National Direct Student loans, Guaranteed Student Loans, and College work-study.

The sample used in this survey is one of a large number of possible samples of the same size that could have been selected. The rates of application for student financial aid cited in this bulletin are based on weighted data from one sample. A different sample or different techniques might produce different values.

One of the non-sampling errors that could potentially influence these findings is "non-response bias." This bias occurs because not all of the parents who were asked to participate did so. Actually, 91 percent did respond. Another form of non-response occurred when some of the parents skipped items in the questionnaire. This analysis was based solely on those 2,342 parents who supplied usable answers to the questions concerning student aid and family income rather than all 3,199 parents who completed questionnaires.

The standard error of the difference between percentages ($d = p_1 - p_2$) can be approximated by taking the square root of the sum of the squares of the standard errors for p_1 and p_2. That is, $s.e.(d) = [s.e.(p_1)^2 + s.e.(p)^2]$. The above approximations generally are conservative.

For More Information

Additional information about these analyses and a multivariate logit analysis of application behaviors are available from Peter Stowe, National Center for Education Statistics, 400 Maryland Avenue SW. (Mail stop 1001), Washington, D.C. 20202, telephone (301) 436-6688.

Additional information about High School and Beyond is available from C. Dennis Carroll, National Center for Education Statistics, 400 Maryland Avenue SW. (Mail stop 1001), Washington, D.C. 20202, telephone (301) 436-6688.

Information about the Center's statistical program and a catalog of NCES publications may be obtained from the Statistical Information Office, National Center for Education Statistics, 400 Maryland Avenue SW. (Mail stop 1001), Washington, D.C. 20202, telephone (301) 436-7900.

Inquiries about the availability of related computer tapes should also be directed to the Statistical Information Office.

Table 1. Percentages of aspiring postsecondary students who applied for financial aid, as related to various student and family characteristics, by level of family income: 1980

Student/family characteristic	Percentage applying	Percentage applying within each level of family income				
		$0 - $12,000	$12,001 - $18,000	$18,001- $30,000	$30,001- $48,000	More than $48,000
Total	51 (1.68)	63 (4.09)	56 (4.46)	53 (3.31)	50 (3.57)	35 (3.83)
Family net worth:						
-$5,000 or more in debt	52 (3.88)	59 (10.39)	46 (9.65)	55 (6.84)	55 (8.14)	44 (9.67)
-$4,999 in debt to +$99	62 (3.29)	67 (5.24)	63 (7.15)	59 (6.80)	62 (8.90)	24*(13.38)
+$100 to +$9,999	56 (3.67)	58 (10.48)	60 (8.56)	59 (6.33)	50 (7.18)	54 (11.41)
+$10,000 to +$49,999	44 (3.94)	53*(17.23)	41 (13.66)	45 (7.36)	46 (6.69)	36 (8.03)
More than +$50,000	32 (4.29)	51*(19.09)	62 (20.35)	30 (11.04)	35 (9.58)	27 (5.51)
Number of siblings in college:						
Zero	46 (2.34)	56 (5.71)	51 (6.14)	48 (4.30)	43 (4.98)	35 (5.40)
One	51 (3.17)	68 (7.37)	60 (8.01)	49 (6.59)	52 (6.26)	31 (6.49)
Two or more	67 (4.32)	64 (10.81)	80 (9.66)	81 (7.60)	70 (8.61)	45 (9.44)
Expected schooling costs:						
None	13 (3.02)	11 (6.23)	9 (6.06)	19 (6.35)	6 (4.76)	16 (10.94)
Less than $500	27 (4.73)	41 (12.42)	47 (14.29)	35 (9.44)	20 (8.01)	10 (8.16)
$500 to $1,000	49 (3.85)	74 (8.26)	62 (9.45)	49 (7.39)	41 (7.98)	27 (8.08)
$1,001 to $2,000	64 (3.62)	82 (7.95)	77 (9.23)	64 (6.78)	62 (6.91)	47 (9.05)
$2,001 or more	68 (2.94)	84 (6.64)	82 (6.59)	78 (5.19)	72 (5.92)	40 (5.94)
Expected living expenses:						
None/probably live at home	30 (2.72)	41 (7.07)	34 (7.47)	34 (5.21)	25 (4.97)	23 (6.46)
Less than $1,000	56 (5.73)	84 (8.61)	58*(15.68)	50 (10.55)	51 (12.65)	27*(14.99)
$1,000 to $1,999	66 (4.01)	80 (8.59)	79 (9.38)	67 (7.58)	69 (7.63)	40 (10.24)
$2,000 to $2,999	68 (3.78)	83 (10.21)	77 (8.45)	72 (6.64)	68 (7.90)	49 (8.59)
$3,000 to $3,999	57 (5.39)	61*(14.68)	69*(13.95)	63 (11.43)	67 (10.68)	36 (9.56)
$4,000 or more	50 (6.03)	67 (13.67)	44*(15.77)	70 (11.86)	53*(15.02)	32 (10.16)
Parental savings for education:						
None	51 (2.24)	62 (4.79)	56 (5.33)	51 (4.20)	47 (5.02)	32 (5.40)
Less than $1,000	62 (7.07)	79*(14.21)	72*(12.97)	58 (12.82)	59*(16.83)	22*(23.68)
$1,000 to $3,000	53 (4.55)	51*(15.58)	48 (14.79)	58 (7.69)	52 (7.86)	50 (11.94)
$3,001 to $6,000	47 (6.01)	22*(26.02)	60*(23.38)	42 (12.07)	53 (10.73)	44 (10.29)
More than $6,000	36 (5.53)	18*(23.17)	75*(26.49)	36*(14.78)	48 (10.29)	31 (7.55)

*Sample size less than 30.

Table 1. Percentages of aspiring postsecondary students who applied for financial aid, as related to various student and family characteristics, by level of family income: 1980 - Continued

Student/family characteristic	Percentage applying	Percentage applying within each level of family income				
		$0 - $12,000	$12,001 - $18,000	$18,001- $30,000	$30,001- $48,000	More than $48,000
Educational aspiration:						
Vocational training	33 (3.31)	37 (7.17)	36 (8.15)	33 (6.10)	26 (6.88)	33 (10.20)
Some college	43 (3.84)	59 (8.85)	36 (8.93)	51 (7.52)	40 (8.26)	23 (8.11)
Complete bachelors degree	58 (2.94)	77 (6.52)	74 (7.05)	61 (5.62)	56 (5.96)	36 (6.33)
Master's or professional	63 (3.20)	79 (7.11)	85 (7.16)	64 (6.35)	62 (6.46)	41 (6.49)
Plans for year after high school:						
Attend some type of PSE	58 (1.93)	72 (4.44)	68 (4.88)	63 (3.67)	56 (4.01)	39 (4.21)
Other	28 (2.97)	40 (7.08)	27 (7.32)	26 (5.46)	25 (6.21)	19 (7.19)
Parental knowledge of Federal financial aid programs:						
A. **Pell grants**						
None	22 (2.40)	32 (6.81)	20 (6.70)	24 (4.93)	21 (4.90)	19 (4.44)
A little	60 (2.63)	67 (6.21)	69 (6.68)	58 (5.02)	64 (5.24)	46 (6.53)
A lot	80 (3.09)	88 (5.76)	82 (6.71)	84 (5.42)	75 (7.08)	66 (10.56)
B. **National Direct Student Loans:**						
None	42 (2.22)	54 (5.02)	44 (5.79)	43 (4.33)	38 (4.78)	31 (4.96)
A little	53 (2.98)	71 (7.29)	67 (7.61)	55 (5.55)	51 (6.07)	33 (6.29)
A lot	77 (4.25)	82*(13.25)	84 (9.56)	86 (6.63)	75 (7.95)	57 (11.00)
C. **Guaranteed Student Loans:**						
None	40 (2.42)	56 (5.02)	44 (6.23)	39 (4.72)	34 (5.26)	20 (5.20)
A little	51 (2.73)	64 (7.80)	63 (6.97)	55 (5.02)	49 (5.47)	34 (5.81)
A lot	76 (3.72)	79*(12.54)	81 (9.86)	87 (5.81)	79 (6.86)	60 (8.19)
D. **College work-study:**						
None	37 (2.55)	46 (6.02)	38 (6.83)	38 (4.95)	36 (5.48)	27 (5.47)
A little	54 (2.54)	71 (6.10)	63 (6.42)	56 (4.87)	51 (5.24)	38 (5.48)
A lot	75 (3.78)	77 (9.00)	83 (8.35)	82 (6.27)	73 (7.79)	54 (11.53)
E. **Number of major Federal financial aid programs known to parents:**						
None	19 (3.86)	34 (8.66)	19 (8.40)	18 (6.03)	16 (6.66)	16 (6.87)
One	43 (4.29)	66 (8.77)	41 (11.37)	50 (8.27)	35 (8.64)	19 (7.86)
Two	51 (4.09)	65 (8.11)	60 (9.68)	47 (8.26)	50 (8.06)	34 (8.61)
Three	59 (4.01)	66 (9.69)	72 (9.27)	64 (7.04)	54 (8.11)	48 (9.22)
Four	69 (3.88)	85 (7.77)	76 (7.33)	71 (5.51)	73 (5.82)	50 (7.75)

*Sample size less than 30.

Table 1. Percentages of aspiring postsecondary students who applied for financial aid, as related to various student and family characteristics, by level of family income: 1980 - Continued

Student/family characteristic	Percentage applying	Percentage applying within each level of family income				
		$0 - $12,000	$12,001 - $18,000	$18,001- $30,000	$30,001- $48,000	More than $48,000
Student inclination to borrow: (To meet increased cost would)						
Borrow	60 (2.68)	69 (7.06)	67 (7.09)	64 (4.88)	60 (5.41)	44 (5.99)
Other means	43 (2.25)	56 (5.15)	50 (5.74)	41 (4.46)	43 (4.75)	28 (4.88)
High school grades:						
A	71 (3.97)	89 (7.25)	73 (9.95)	72 (7.26)	70 (8.48)	55 (9.92)
A - B	57 (3.38)	61 (8.58)	80 (7.34)	57 (6.50)	56 (6.85)	42 (7.66)
B	49 (3.53)	64 (8.51)	57 (9.26)	52 (6.99)	45 (6.91)	33 (7.63)
B - C	41 (3.39)	53 (7.86)	40 (9.22)	46 (6.52)	42 (7.37)	21 (6.57)
C or lower	33 (4.25)	49 (9.48)	28 (9.77)	34 (8.51)	25 (9.10)	28 (10.07)
Race/ethnicity:						
White, non-Hispanic	48 (2.04)	59 (6.39)	56 (5.52)	52 (3.80)	49 (3.89)	31 (4.16)
Black, non-Hispanic	69 (4.61)	74 (7.03)	69 (10.91)	65 (10.08)	71*(15.00)	63*(14.56)
Hispanic	52 (5.30)	54 (8.91)	46 (11.42)	52 (11.56)	65*(15.13)	41*(15.60)
Other	48 (6.24)	52 (13.49)	39*(16.82)	53 (12.79)	37 (12.89)	54 (14.06)

* Sample size less than 30.

Note: Each number in parentheses is the standard error of the associated percentage.